ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E1436
JACC March 27, 2012
Volume 59, Issue 13

Chronic CAD/Stable Ischemic Heart Disease

RELATIONSHIP BETWEEN FRACTIONAL FLOW RESERVE AND ANGIOGRAPHIC AND INTRAVASCULAR ULTRASOUND PARAMETERS IN OSTIAL LESIONS: MAJOR EPICARDIAL VESSEL VS. SIDE BRANCH OSTIAL LESIONS

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 9:30 a.m.-10:30 a.m.

Session Title: New Tools for Invasive Evaluation of the Coronaries: What Else Can I See?
Abstract Category: 2. Chronic CAD/Stable Ischemic Heart Disease: Clinical
Presentation Number: 1203-304

Authors: *Jin-Sin Koh, Bon Kwon Koo, Ji-Hyun Kim, Kyung Woo Park, Hyun-Jae Kang, Han-Mo Yang, Hyo-Soo Kim, Byung-Hee Oh, Young-Bae Park, Seoul National University Hospital, Seoul, South Korea, Gyeongsang National University Hospital, Jinju, South Korea*

Background: Evaluation of ostial lesions is clinically very important. However, anatomical parameters have limitations in the prediction of the functional significance of coronary stenosis.

Methods: IVUS and FFR measurement were performed in 93 lesions (major epicardial vessel 38, side branch 55). Optimal angiographic and IVUS criteria and their diagnostic accuracy for functionally significant stenoses (FFR ≤0.8) were assessed.

Results: In major epicardial vessel (MV) ostial lesions, FFR had negative correlation with angiographic % diameter stenosis (r=-0.68, p <.001), minimum lumen area (MLA) by IVUS (r=0.55, p<0.001), % plaque burden (r=-0.42, p = 0.011) and % area stenosis (r=-0.49, p = 0.003). Meanwhile, FFR had no correlation with angiographic % diameter stenosis (r=-0.067, p = 0.635) and weak correlation with MLA (r=0.30, p = 0.026) in side branch (SB) ostial lesions. In MV ostial lesions, best cutoff value of angiographic % diameter stenosis, MLA, % plaque burden and % area stenosis to determine the functional significance was 53%, 3.5mm2, 70% and 50%. However, statistically significant cutoff value of % diameter stenosis and MLA could not be found in SB ostial lesions.

Conclusions: The relations between angiographic/IVUS parameters and FFR were different between MV and SB ostial lesions. Angiographic and IVUS parameters had good correlation with FFR in MV ostial lesions. However, these parameters had poor correlation with FFR in SB ostial lesions.